

**ABSTRACT**

A system and method for training a radio receiver to mitigate the effects of ISI caused by multi-path includes receiving a header of a transmitted packet at the receiver, the header containing at least one flag to identify a corresponding reference training sequence to be selected by the receiver and to indicate whether a training sequence is inserted in a packet. The receiver decodes the header to determine whether a training sequence is indicated by the flag and to select the corresponding reference training sequence. The training sequence is transmitted positioned within a data packet at a midamble between the header and a first segment of the data packet. The received training sequence is compared with the selected reference training sequence and the equalization parameters of the receiver are adjusted based on the results of the comparison. The selected reference training sequence corresponds to the modulation scheme applied to the payload.

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